

Former Fellow Follow-Up with Dr. Mark Ziats, Physician Resident

Dr. Mark Ziats is an internal medicine physician resident at Michigan Medicine. Over the course of his education and training, Dr. Ziats has dipped his toes in multiple career pools. Following the completion of his Bachelor of Science in Biochemistry and Chemistry coursework at Clemson University, he served briefly as a legislative intern to the U.S. House of Representatives. He then completed a postbac fellowship at the NIH, received a MD and PhD in Genetics through Cambridge University and the NIH Graduate Partnership Program, completed a biotechnology entrepreneurship program, and



Mark Ziats, MD, PhD

founded his own company, Creative Bioinformatics. During his graduate work at the NICHD, Dr. Ziats worked in Dr. Owen Rennert's lab studying long non-coding RNAs in the autistic brain.

In honor of our final issue of the "Think Outside the Box" series, Dr. Ziats has answered several questions for *The NICHD Connection*. Enjoy the voyage through his diverse career path so far!

It's hard to tell if you started school wanting to be a scientist, doctor, policy-maker, or entrepreneur! When you were an undergraduate, did you have an "end game" in mind? What were your original goals as your were working on your bachelor degree?

I always wanted to do a lot of different things, and set out intending to pursue many different avenues—always was very interested in the intersection of medicine/science and business. I was also practical though, so was very focused on getting into medical school at that time. My original goals are still the same—be my own boss, only spend time working on things I find interesting, create new value.

What prompted you to serve as a legislative intern in the U.S. House of Representatives? What did you do there?

With advanced placement (AP) credits from high school, I was on track to graduate early by one semester. I was looking for something to do during the extra semester, and figured I would spend the time on something

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January 2018

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Letter from the Editor

In honor of the third and final installment in our "Thinking Outside the Box" series, I offer a piece of Flash Fiction (a short, fictional story) at **the end of this letter**. But first, let me tell you about an exciting line up of articles for our opening issue of 2018.

If you want to meet someone who thinks outside the box, check out this month's "Former Fellow Follow-up" with Dr. Mark Ziats, physician resident. He's dabbled (well, maybe more than dabbled) in policy, research, entrepreneurship, and medicine. During each step of the way, Dr. Ziats required good interviewing skills. For a quick refresher on how to interview well, turn to page 7 for Dr. Carlos Guardia's recap of Scott Morgan's latest Interviewing Workshop.

Dr. Suna Gulay's first <u>"Rep Report"</u> of the year is full of goodies, including helpful insurance information and upcoming Fellows Committee (FelCom) opportunities. Plus, don't miss the 2018 <u>Three-minute-Talk (TmT</u>) competition information and other exciting <u>January announcements</u> and <u>events</u>.

Saving the best for last, I want to personally congratulate Dr. Yvette Pittman on her official recognition as the new Director of the NICHD Division of Intramural Research Office of Education. I have worked with Dr. Pittman in the capacity of this newsletter for several years. Her devotion to the success of NICHD Fellows is evidenced by her remarkable organization of career development programs and her eagerness to meet with fellows on a regular basis. Also, Dr. Pittman has been a steadfast supporter of this newsletter and offers a hand in every issue! On behalf of *The NICHD Connection*, congratulations Dr. Pittman!

And a Happy New Year to all!

Your Editor in Chief, Shana R. Spindler, PhD

Please send questions and comments (and any fun Flash Fiction sci-fi you may come up with!) to our editor at **Shana.Spindler@gmail.com**.

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Letter from the Editor

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HELLO?

By Shana Spindler

I scan the room. Stark white walls surround several desks with machines that glow bright from their faces. Two men stand in front of me, gesturing wildly in conversation.

I try to say something. "Hello? Can you hear me?" The men continue talking without notice of my attempts to communicate. "Hello? Excuse me, I need some help here."

I call out again. "Help me! Something is wrong, terribly wrong. You must see me—I'm looking right at you."

One of the men leaves the room abruptly. The other man approaches within inches of my face and stares directly at me. "Yes! Look at me! I'm here!"

In horror, I watch the man mouth the words "I'm sorry, we have to pull the plug."

"No, I'm here! Hello? Hello?"

The man bends out of view. In a desperate final attempt, I scream one more hello.



Philip threw his arms up in exasperation. "So what are you telling me, Jack, this version is a lost cause?"

Jack looked at Philip. "Hey man, I'm as upset as you are, but someone in the lab must have accessed the

program last night and entered some script that is completely incomprehensible. I have no clue what any of this means!"

Philip leaned on the wall and wiped the corners of his mouth in frustration. "But we were so close. I really think we were approaching Artificial Intelligence. And I was just about finished programming the audio inputs and speaker function. If you unplug that computer, you know the fail safe will kick in. We'll lose everything."

"I don't want to hear it, Phil. I told you not to program the self-destruct

feature—you've been watching too many sci-fi movies. There's absolutely no way I can salvage this code. It's all over the place." Jack sighed. "I've never seen anything like it."

Philip couldn't watch months of work disappear. He turned and left the room as Jack walked up to the computer and put his face within inches of the screen. Darn it, I really don't want to do this. "I'm sorry, we have to pull the plug."

As Jack bent down to remove the cord from the wall, a small "hello" blinked once in the command line, and with the electricity cut, the screen went black.

THE END

EDITOR'S NOTE: This story is about a lack of patience and, more importantly, a failure to think outside the box. The unrealized potential of new technology is stymied by an inability to consider unconventional solutions to a problem. I hope our "Thinking Outside the Box" series has convinced you that venturing beyond dogma provides opportunity to discover something new—in the lab or in your career.

Former Fellow Follow-Up with Dr. Mark Ziats (continued from page 1)

different than the rest of my undergraduate training in science. I looked into a few different possibilities, but when the U.S. House of Representatives opportunity came up it seemed great—I have always been interested in public policy. I was an intern in a congressman's office, doing random low-level tasks, but it was a neat exposure to a totally different world. Because I did it as part of an educational program through Clemson, I had a lot of additional opportunities to attend hearings, meet with people, etc., in addition to the day-to-day work.

After undergraduate training, you decided to pursue a postbac fellowship. What made you decide to go that direction, and during your postbac year, what did you learn about your career aspirations? Did a year doing research affect your long-term goals?

Two reasons that I did a postbac: one, I wanted to travel around Europe with two of my college friends after graduation for a few months and needed a way to finance it and time to do it before medical school, and two, where I went for undergrad (Clemson University) was a great place but was not affiliated with a medical school. I hadn't had a great chance to see true translational MD-PhD type careers and labs up close. I wanted that experience to help confirm that I really wanted to pursue that path.

I was in Dr. Gahl's lab in NHGRI during my postbac year—around the time he was formally launching the Undiagnosed Disease Program. It was an incredible experience, and he was an incredible mentor and really an inspiration in terms of his career and the type of person he is. It solidified for me that I wanted to pursue the Medical Scientist Training Program, and that I wanted to work in genetics long term.

What made you choose the MD-PhD program over the purely clinical or basic science route? I wanted formal training in research and, in particular, better understanding of human genetics and genetic technologies, which you cannot get from MD training alone without taking a significant amount of time off for research anyway. But my long-term interest was in the very practical application of science, so I felt as though I needed to understand clinical medicine.

After deciding to become a "Doctor-Doctor," you expanded your repertoire one more time and completed the INNoVATE Certificate Program, a biotechnology entrepreneurship, at The Johns Hopkins University. I think most people would consider an MD-PhD program to be a challenge on its own. What enticed you to pursue additional training in entrepreneurship?

I always had been interested in biotechnology entrepreneurship and had always intended to eventually transition into that area. During my PhD time at the NIH was the first time I really had enough time and experience to begin to explore this, and then when I found out about the INNoVATE program, it seemed like an ideal initial exposure to the field—so I did it. It was a great initial experience to learn the basics. I

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should say that my NICHD mentor, Dr. Owen Rennert, was very supportive of this, as was my PhD program (the NIH OxCam program), both of whom actually funded it for me after I submitted a small proposal.

Not many people can say they founded a company during their postgraduate studies. What's the back-story behind Creative Bioinformatics? Do you still play a role in the company in addition to your residency?

During my PhD, most of my work was computational data analysis. I kept thinking that if I could outsource some of the work it could go a thousand times faster, and I could work on many more projects at one time. Dr. Rennert agreed, but we couldn't find a way to do it. So it seemed like an opportunity.

I basically set up a consulting firm working as a middleman broker for labs to outsource their data analysis to postdoc type people who worked as freelancers for extra income. I was surprised at the response frankly, and I was quickly doing a lot of business, so I brought on another partner. We were looking at how we could scale up away from a consulting model. We went through an incubator (a program for startup businesses to get going quicker, often associated with startup funds. Ours was called TMCx). I was finishing my fourth year of medical school at the time, during which I developed the initial framework for an online marketplace—sort of like Uber—using private investment money to fund the build-out. At that point, I was finishing medical school, and I knew I wanted to go on to residency and it wasn't going to be feasible to do both. I sold my part of the company to the other partners and am no longer involved. I don't know all the details, but as far as I am aware, the marketplace never went live, and they are running it as a consulting firm still, but under a different name. It was an incredible experience.

I think we would all love to know how your experiences as a legislative intern, entrepreneur, and physician-scientist have influenced your approach to a medical residency. What have these experiences added to your current position?

In terms of my current position as a physician/resident, I can very easily relate to the wide variety of people I have as patients, because I have a lot of diverse experiences. This is a critical component of patient care that is

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often overlooked in my opinion. Also it makes even the mundane stuff in the hospital more interesting and fun because I am often thinking about how annoyances could be business opportunities, or what the mechanisms could be behind patients' problems that we don't understand.

Can you tell us about the life of an internal medicine resident? What's your typical day like?

As you advance in years it gets more varied, but most days last year when I was an intern were similar:

- 7 a.m., arrive at the hospital and receive information from the night team about what happened to my patients since I left the evening before
- 7 to 9 a.m., pre-round by seeing my patients, look over their new studies, come up with a plan for the day
- 9 to 11 a.m., round with the team (our attending, other interns, etc.) to discuss each patient and see them again, finalize plans (lots of learning happens on rounds)
- 11 a.m. to ??, do a bunch of random tasks like call consultants, place new orders, check in on patients, go to teaching conferences, respond to issues that come up, write notes, answer nursing questions, etc. (I can usually finish by about 5 p.m. if not admitting new patients, 7 to 8 p.m. if admitting new patients that day)
- Repeat 6 of the 7 days per week

For NICHD fellows who are interested in a diverse career portfolio like yours, what advice can you offer?

Just take advantage of possible opportunities—don't reflexively say no or assume you won't have time. Be comfortable with being new to something or being in an uncomfortable situation. Randomly reach out to people if you think something is of potential interest and go meet with them. Take advantage of all the resources NICHD provides and the incredible support that NICHD administers have for the trainees—I was always very happy and impressed with this aspect of NICHD.

If you have questions for Dr. Ziats, please contact him at mziats@med.umich.edu.

Interviewing Workshop with Scott Morgan Recap

By Carlos M. Guardia, PhD

"Take a moment and look at all that white empty space in your CV...that space represents all that defines you—and what they are going to ask you during your job interview." These were the first words that Scott Morgan (of **The Morgan Group**) said to capture our attention during his workshop on successful job interviews. Morgan is an expert trainer and facilitator in the art of communication for scientists. Through his work, he has found that scientists tend to spend too much time on putting together a brilliant CV, and not enough time on the critical step of the interview, which is one of the most important parts of the job search and hiring process.

The secret to an effective interview is to prepare for the questions and practice the answers in advance. Morgan created a list with the ten most popular questions asked during interviews (see sidebar), and we practiced how to properly answer them. We talked, for example, about our personal background and motivations, rehearsed a five-year plan response, and shared in the panic of the Why should we hire you? question.

Morgan reminded us that there are no good or bad answers, but there are vivid and vague responses, which is why our goal while answering is to paint a picture in the mind of the evaluators. We learned to avoid using self-qualifying and over-confident adjectives, like hard working, motivated, and smart. Instead, he encouraged us to illustrate how we are hard working, with real examples from actual work situations. Also, Morgan pointed out that the interview should flow in a logical way, since the interviewers are interested in your analytical thinking, reasoning, and problem-solving attitude. This stage of the hiring process is more about you than your results from previous lab experiences. The hard data and information

about your science is already in your CV and research proposal.

Another interesting segment of the workshop included how to talk about your current work. The members of the interviewing board have specific needs for their institution, and they are looking for a new candidate who meets those needs. For that reason, Morgan advised us to review the job description carefully and list the position requirements. He then introduced the *funnel approach* as a way to show

how to address the needs of the institute. You should begin with the big picture first, then lead the interviewing board into your specific area of knowledge (like the wide mouth of a funnel narrowing at the bottom). During this time, you should identify the issues and problems that you may share with the institution, and of these, focus on your work that could offer solutions. Bonding and identifying with the interviewers by sharing common, problematic experiences may make them feel interested in your work and want to bring you to their institution.

Finally, Skype interviews are gaining in popularity, especially for the first interview step before an in-person meeting. For this method of interview, Morgan recommended that you utilize the space in front of you by pasting reminders and useful tips on the computer screen. You should also be thoughtful about the lighting (avoid lights from above) and the backgrounds (never place yourself in front of a window).

Wishing you the best of luck using Morgan's advice and strategies during your next job interview!

THE TEN MOST COMMON QUESTION TOPICS:

- 1. Personal background
- 2. Academic background
- 3. Early scientific motivation
- 4. Specific field motivation
- 5. Five-year plan
- 6. Strong point
- 7. Weak point
- 8. Why you?
- 9. Current work
- 10. Hypothetical Questions (What if...?)



The Rep Report

By Suna Gulay, PhD

As the current NICHD Basic Sciences Representative, I represent NICHD postdoctoral fellows at the FelCom meeting every month and share the latest news with you here. Do you have a concern or question that you want brought up at the next meeting? Contact me at suna.gulay@nih.gov!

Happy New Year, Fellows!

As we start 2018, the <u>NIH Child Care Board</u> wants your feedback. What are your needs for child care services? Which needs have not been adequately met, including special needs like dual language and medical conditions? Are you having any subsidy issues? Please send your concerns and feedback to me, or directly to the Child Care Board liaisons of FelCom: Choon Kiat Sim (<u>choonkiat.sim@nih.gov</u>) and Blake Warner (<u>blake.warner@nih.gov</u>).

Recently, there have been changes to FAES provided health insurance, most importantly increases in deductibles and out-of-pocket expense limits. These took effect on November 1, 2017. Please review the FAES Benefit Guide 2017-18 for a comprehensive review of your benefits. FAES partners with CoreSource to provide NIH postdoctoral fellows and their families with Aetna Signature Administrators PPO healthcare plan, VSP Choice Exam Plus vision benefits plan, and pharmacy benefits through CVS CareMark. FAES insurance specialists and CoreSource will help you choose in-network providers and understand your benefits. Please do not hesitate to use these resources when you need help or clarification.

Stay tuned for opportunities to join FelCom in the spring: Social Committee co-chair and Recreation and Welfare Committee liaison positions will be opening soon. Contact me at the above email address to learn about the latest openings and other ways to serve on FelCom, and how the FelCom experience may be beneficial to your training.

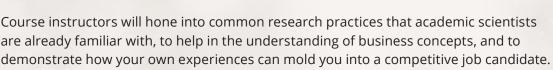


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Three-Minute Talks (TmT) Competition 2018 SCIENCE COMMUNICATION TRAINING AND AWARDS PROGRAM

NOW SEEKING POSTDOC & CLINICAL FELLOWS, GRADUATE STUDENTS & POSTBACS

- » Learn how to explain your research effectively to a broad scientific audience, in three minutes or less, with one-on-one professional training from public speaking coach Scott Morgan
- » Get the chance to win up to \$1,000 for use towards approved training or travel to a scientific meeting
- » Visit the <u>NICHD TmT Program website</u> for more details: up to 10 DIR fellows (postbac, predoctoral, postdoctoral, visiting and clinical) are invited to compete for these science communication honors





2018 TMT PROGRAM TIMELINE AND DETAILS

FRIDAY, FEBRUARY 23

DEADLINE TO ENTER

- » To enter, email your completed submission form to <u>yvette.pittman@</u> nih.gov
- » The submission form, competition rules and judging criteria are available at the NICHD TmT Webpage

WEDNESDAY, FEBRUARY 28

"SPEAKING ABOUT SCIENCE" WORKSHOP

- » Tips on scientific storytelling with only one slide
- » Speaking in plain language while addressing the human health relevance for your research
- » Creating effective visual aids

10 AM - NOON

INDIVIDUAL COACHING/PRACTICE SESSIONS

- » Up to two one-on-one sessions with public speaking coach Scott Morgan
- » Practice your talk and obtain feedback on oral presentation skills and speech development

FRIDAY, MARCH 9 & WEDNESDAY, MARCH 21

TUESDAY, MAY 8

NICHD TMT COMPETITION

2 – 3 PM

» Three finalists will be chosen to advance to the next round

» Finalists will each be awarded \$500 for approved training/travel and the opportunity to have your talk professionally produced for a video

THURSDAY, JUNE 28

NIH TMT COMPETITION

(With NICHD, NHGRI, NEI, NIAMS, & NIDCR fellows)

10 AM - NOON

1st, 2nd, and 3rd place winners will be chosen to receive an additional \$500 training/travel award.

January Announcements

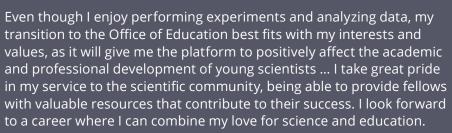
DR. YVETTE PITTMAN NAMED DIRECTOR OF DIR OFFICE OF EDUCATION

Congratulations to *Dr. Yvette Pittman* on her appointment as Director of the NICHD Division of Intramural Research (DIR) Office of Education!

Dr. Pittman, former postdoctoral fellow of Dr. Thomas Dever's laboratory, served as the Associate Director of the DIR Office of Education from 2013 to 2016 and the Acting Director since the end of 2016.

When Dr. Pittman first joined the DIR Office of Education, she shared the following sentiment with *The NICHD Connection*:

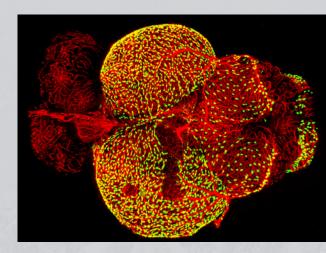




And she's done just that! Congratulations, Dr. Pittman, on this fantastic achievement!

WEINSTEIN LAB FELLOWS AMONG WINNERS OF FASEB 2017 BIOART CONTEST

The Federation of American Societies for Experimental Biology (FASEB) hosts an annual BioArt competition "to share the beauty and breadth of biological research with the public by celebrating the art of science," according to the FASEB website. The Weinstein lab's microscopy image of Fluorescent Granular Perithelial cells, in close association with the blood vessels that surround an adult zebrafish's brain, earned a winning spot in the 2017 BioArt contest. The team members behind the winning image include Marina Venero Galanternik, Daniel Castranova, Tuyet Nguyen, and Brant M. Weinstein. Congratulations all!



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CALLING ALL FELLOWS OF NICHD—IT'S IMAGE COMPETITION TIME!

The 14th Annual NICHD Fellows Retreat will be held on April 20, 2018, and we are looking for an image to feature.

The winning image, chosen by the Retreat Steering Committee, will be showcased on the retreat website, on posters, and used as the front cover of the event program. Also, to highlight everyone's imagery, all submissions we receive will be used to produce a collage posted on the 2018 retreat website. You can always take a look at the image submissions from previous years at http://retreat.nichd.nih.gov.

In addition to image resolution and quality, selection criteria include the relevance to our institute's mission and artistic view of the image. All submissions (at the highest possible resolution) should be sent to Nicki Swan (jonasnic@ mail.nih.gov) by Friday, January 19, with a brief caption for the image.

At left, last year's winning image by Dr. Jiangnan Luo, Lee lab.

NICHD FELLOWS ADVISORY COMMITTEE: SEEKING NEW MEMBERS!

The Office of Education formed an advisory committee in 2016. We are seeking several more dedicated members to help us develop and initiate academic support programs for the institute. Both domestic and visiting fellows are needed. We want to achieve a broad representation, culturally and academically, so we can address the needs of all our trainees at NICHD. The committee meets monthly to exchange ideas and informally discuss ways we can enhance and tailor the training experience within the NICHD intramural program.

Some potential topics for our committee are how to:

- » Increase participation in training activities
- » Expose fellows to various careers in science
- » Identify teaching opportunities
- » Identify internal and external research funding mechanisms
- » Establish a structure for sharing scientific and career resources within the institute

The committee meets once a month on Thursdays, from 3 to 4 PM. Our first few meetings for 2018 are January 11, February 8, and March 8.

Don't miss this opportunity to serve your intramural NICHD community. Please contact Dr. Yvette Pittman at yvette.pittman@nih.gov if you are interested in joining the group.

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January Announcements (continued from page 12)

AAAS MASS MEDIA SCIENCE & ENGINEERING SUMMER FELLOWSHIP

Applications open October 16 - January 15!

From the AAAS Mass Media Fellowship website:

This highly competitive program strengthens the connections between scientists and journalists by placing advanced undergraduate, graduate, and post-graduate level scientists, engineers and mathematicians at media organizations nationwide. Fellows have worked as reporters, editors, researchers, and production assistants at such media outlets as the Los Angeles Times, National Public Radio, The Washington Post, WIRED, and Scientific American.

For 10 weeks during the summer, the Mass Media Fellows use their academic training in the sciences as they research, write and report today's headlines, sharpening their abilities to communicate complex scientific issues to non-specialists. Participants come in knowing the importance of translating their work for the public, but they leave with the tools and the know-how to accomplish this important goal.

For additional information about the program visit aaas.org/mmfellowship

SAVE THE DATE: FEBRUARY 22, NIH GRADUATE STUDENT RESEARCH SYMPOSIUM

The 14th Annual NIH Graduate Student Research Symposium will be held on Thursday, February 22, 2018, 9 AM - 4 PM at Natcher Conference Center. The daylong event includes:

- » Keynote address from Dr. Eric Betzig, Nobel laureate and group leader at Janelia Research Campus, Howard Hughes Medical Institute
- » Elevator pitch competition
- » Student talks
- » Poster presentations of dissertation research
- » Presentation of the annual Outstanding Mentor Awards
- The annual GPP graduation ceremony
- NIH Graduate Student Research Awards (NGSRAs)

See you there!

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January Events

THURSDAY, JANUARY 11, 3 – 4 PM
NICHD Fellows Advisory Committee Meeting

The committee meets monthly to exchange ideas and informally discuss ways we can enhance and tailor the training experience within the NICHD intramural program. The committee meets once a month on Thursdays, from 3 to 4 PM. Please contact Dr. Yvette Pittman at **yvette.pittman@nih.gov** if you are interested in joining the group.

FRIDAY, JANUARY 12 & JANUARY 19, 9 AM - 5 PM

The Business of Science: Your Guide to Career Success

Session 1: Business of Science and Communications

Session 2: Developing People, Negotiating with your Advisor, and Building Effective Teams

A new training for fellows and graduate students interested in pursuing a career in industry, the course is designed to translate academic research skills into the business-oriented qualifications that hiring companies are looking for. Course instructors will hone into common research practices that academic scientists are already familiar with, to help in the understanding of business concepts, and to demonstrate how your own experiences can mold you into a competitive job candidate.

This course is by pre-registration only. If you would like to learn more, please contact Dr. Yvette Pittman at yvette.pittman@nih.gov.

THURSDAY, JANUARY 25, 5:30 - 7:30 PM

Fellows Social Networking (FSN) event Tapp'd Bethesda, 4915 Saint Elmo Ave

Beginning this month, the NICHD Fellows Advisory Committee will host a "Fellows Social Networking (FSN)" event four times a year at Tapp'd, a local restaurant in Bethesda.

This will be a great opportunity for the NICHD fellows community to socialize and network with each other. All current trainees within the institute are welcome, and we plan to invite a NICHD fellow alumnus, representing a different career path, for each of the dates listed below.

We hope you can join us for our inaugural event! Future 2018 FSN events will occur on May 24, July 26, and October 25, from 5:30 – 7:30 PM.

Please RSVP with Dr. Yvette Pittman (yvette.pittman@nih.gov) if you plan to attend.

